REMARKS/ARGUMENTS

Status and Request for Reconsideration

Reconsideration of this application is requested. The claims presented for reconsideration are claims 1-31, as amended. Claim 2 has been amended to affirmatively recite that the air separating step comprises a cryogenic separation, such that the air separation unit comprises a cryogenic air separation unit. Exemplary support for this amendment can be found in the originally-filed specification, *e.g.*, at paragraphs [0053]-[0055]. No new matter has been added by this amendment.

Claim Rejections - 35 U.S.C. § 103

In the Advisory Action, the Examiner has still not clarified, for the record, that the wrong Vaughn reference was cited in the obviousness rejection. Applicants appreciate, however, the Examiner's clarification in the Advisory Action that Vaughn and Williamson are to be combined for the obviousness rejection. Applicants respectfully request that the aforementioned clarification be confirmed by the Examiner in the next Office Action.

Based on assumptions discussed above, claims 1-31 were rejected under 35 U.S.C. § 103(a) as being obvious over U.S. Patent No. 6,541,415 to Vaughn *et al.* (hereinafter "Vaughn"), in view of U.S. Patent No. 5,457, 077 to Williamson *et al.* (hereinafter "Williamson"). The Examiner indicated that Vaughn discloses a process for regenerating a catalyst comprising contacting the catalyst with an oxygenate to form an olefin comprising ethylene and/or propylene, sending the coked catalyst to a regenerator for oxidation in an oxygen atmosphere, and re-circulation. The Examiner acknowledges that Vaughn is deficient in disclosing air separation into an oxygen-containing stream and a nitrogen-containing stream. The Examiner further indicates that Williamson discloses separating air into an oxygen-containing stream and a nitrogen-containing stream in a process for regenerating catalyst. Applicants respectfully traverse the rejection for the following reasons.

The Advisory Action allegedly dismisses Applicants' points raised in their Amendment and Response after final as being unpersuasive, but often does not actually address Applicants' points, instead taking positions on term interpretations that result in spurious conclusions.

For instance, the Examiner has interpreted the claimed air separation step as being disclosed in the cited prior art because "such air would be separated from the atmosphere, since it is taken into the system." Applicants respectfully submit that this is a far-fetched interpretation. One of ordinary skill in the art would know that air separation refers to separating some of the components of air (most notably oxygen and nitrogen) from each other. Furthermore, Applicants' arguments regarding the lack of motivation to combine Williamson and Vaughn, *e.g.*, specifically with respect to the oxygen to nitrogen ratio from claim 8, were summarily dismissed as unpersuasive for individually addressing references (citing *In re Keller*). However, Applicants' argument, namely that Vaughn's air has one oxygen to nitrogen ratio and that Williamson's separated air has another, showed the inconsistency between the two cited references with respect to that teaching. Indeed, it was the Examiner, and not Applicants, who picked and chose between features of individual, disparate disclosures in the prior art, *i.e.*, the air separation of Williamson (to form nitrogen-rich and oxygen-rich streams), in combination with the oxygen to nitrogen ratio of Vaughn's air. Because Williamson's separated air, by definition, cannot have the oxygen to nitrogen ratio of un-separated air, Applicants argued that such an illogical combination could not constitute a proper basis for a rejection. As Applicants further stated in their Amendment and Response after final:

> ... the Examiner is ignoring both the fact that Williamson, and NOT Vaughn, is cited for teaching an enriched and/or depleted (as compared to air) oxygen-containing stream, and NOT air, and the fact that Williamson not only does not teach using such streams at room temperature, but affirmatively teaches away from using low temperature gas streams. Indeed, U.S. Patent No. 4,787,919, which Williamson incorporates by reference at column 12, line 20, teaches superheating of compressed air for membrane air separation systems. (Applicants note that the other patent which Williamson incorporates by reference for membrane air separation systems, *i.e.*, U.S. Patent No. 3,830,733, at column 12, line 25, does not disclose any separation temperature and only discloses details of fabricating polymeric gas separation membranes).

(emphases in original).

In addition, whether or not the combination of Williamson and Vaughn is appropriately accomplished according to the Examiner's rationale, in relation to claim 1, the Examiner has inappropriately extended the combination to rendering obvious the use of air streams and/or

separated air (*i.e.*, oxygen-rich and/or nitrogen-rich) streams in areas of the process not disclosed in either Williamson or Vaughn.

For instance, Applicants concede that a fluidized bed must be fluidized with some medium, but the Examiner baldly asserts that the separated air stream should be an obvious source. Applicants respectfully disagree, and, more importantly, can find no support in the cited prior art for such an assertion. Williamson discloses air separation in a very limited capacity, teaching its limited use in "different treatment steps of the regeneration zone" (*see* Williamson at column 12, lines 30-33). Williamson does not teach or suggest the use of separated air streams in any other portion of any process, no less in any oxygenates-to-olefins process, as recited in claims 9-10. This same argument applies to claim 11 (use of nitrogen-containing stream to regenerate the poison-containing molecular sieve particle), which rejection is, incidentally, also deficient in that the teaching of polyolefin polymerization also does not render obvious the presence of a polymerization catalyst poison nor a method of dealing with its presence. This same argument further applies at least to claim 21 (step a; use of oxygen-containing stream to convert the natural gas to syngas), claim 23 (step b; use of the nitrogen-containing stream to regenerate the water-containing molecular sieve particle), claim 24 (step b; using the nitrogen-containing stream to remove volatile compounds from the polymer), claims 25-26 (step b; using the nitrogen-containing stream for blanketing the polymer), and claims 27-28 (using the nitrogen-containing stream to derime any portion of an apparatus).

The Examiner cannot summarily assume, without motivation either in the cited art or otherwise found in the record, that any step utilizing any of the separated streams must be obvious merely from the disclosure in Williamson.

Additionally, because Williamson teaches using separated air for regeneration purposes only, and because Vaughn teaches using non-separated air for regeneration purposes, Applicants respectfully submit that the Examiner has not shown how the combination of Vaughn and Williamson renders obvious the use of a compressed air stream (*e.g.*, pre-separation) to operate a valve actuator (claims 14-20), to fluidize and transport at least a portion of the molecular sieve catalyst composition (claim 29), for blanketing at least a portion of the molecular sieve catalyst

composition in the catalyst storage unit (claim 30), or in an aerobic water treatment system for removing contaminants from a water-containing effluent stream (claim 31).

Further, the Examiner does not acknowledge distinctions made by Applicants between what is a product in a prior art process, what is a reactant in a claimed process, and the lack of disclosure or suggestion of substitution of a product for a reactant in the cited prior art. For example, Applicants respectfully submit that it is improper for the Examiner to assume that an integrated process for making oxygenates such as methanol from syngas must be obvious merely because Vaughn discloses methanol as an oxygenate to be converted, as is indicated on page 4 of the Office Action, with reference to claims 21-23. Applicants concede that methanol is an oxygenate, but that is not pertinent to Applicants' point that there is no evidence in the cited prior art or on the record that further use of a disclosed product as a reactant in an undisclosed process would be obvious to one of ordinary skill in the art.

Furthermore, Applicants have amended dependent claim 2 to recite that the separation of air comprises a cryogenic step, such that the air separation unit comprises a cryogenic air separation unit. Vaughn does not teach or suggest air separation at all, and Williamson does not disclose or suggest cryogenic air separation, instead disclosing only membrane separation systems. Therefore, Applicants respectfully submit that at least claim 2 should be allowable over the cited prior art.

For any one or more of the foregoing reasons, Applicants respectfully submit that the obviousness rejection of claims 1-31 cannot be maintained and respectfully request its reconsideration and withdrawal.

CONCLUSION

Having demonstrated that the cited references fail to disclose or suggest the invention as presented herein, and all other formal issues having now been fully addressed, this application is in condition for allowance. Accordingly, Applicants request early and favorable reconsideration in the form of a Notice of Allowance.

If there are any questions regarding this amendment or the application in general, a telephone call to the undersigned would be appreciated, since this should expedite the prosecution of the application for all concerned.

If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response. Please charge any deficiency in fees or credit any overpayments to Deposit Account No. 05-1712 (Docket #: 2004B025).

Respectfully submitted,

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